



Mary Lacey Accepts Invitation to Keynote at 75th Shock & Vibration Symposium

Mrs. Mary Lacey, the Technical Director of the Navy's Naval Surface Warfare Centers, has accepted an invitation from Dr. Charles Robert Welch, the SAVIAC Director, to deliver the Keynote Address at the 75th Shock & Vibration Symposium to be held the week of October 17-22, 2004 at the Cavalier Hotel in Virginia Beach, VA. The Opening Session will be Tuesday morning, October 19.

Mrs. Lacey, a member of the Federal Government's Senior Executive Service (SES), started her Navy career as a Federal Junior Fellow at the Naval Ordnance Laboratory (NOL) in 1973. She held positions at NOL in underwater shock testing and evaluation, advanced weapon systems, shipboard fire fighting, and nuclear weapons safety. She has been active in Navy academic industrial partnerships and technology teaming efforts across the Naval Sea Systems Command (NAVSEA). She previously served as Executive Director, Naval Surface Warfare Center, Indian Head, MD, Division, as the Division Director of Science and Technology at NSWC, Dahlgren, VA, Division, as the Head of the Systems Research and Technology Department at Dahlgren Division, as the Navy program manager for advanced technology in the Office of the Chief of Naval Operations, and in numerous leadership positions in advanced technology, test, and evaluation.

The Naval Surface Warfare Center (NSWC) is a full-spectrum research, development, test and evaluation, engineering, and fleet support center for ship hull, mechanical and electrical systems, surface ship combat systems, coastal warfare systems, and other offensive and defensive systems associated with surface warfare. As the TD, Mrs. Lacey is the most senior civilian in NSWC, which employs approximately 17,000 people and has a \$2.9 billion business base. She leads a network of technical installations, including six divisions branching across the United States.

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HAPPY NEW YEAR!!!

**Wishing you health & happiness in
2004!!**

The SAVIAC Staff

A Preview: The 75th Symposium's Featured Organizations

Every year SAVIAC, in consultation with the Technical Advisory Group (TAG), selects one or more Government Agencies and Commercial Companies to be featured at the Shock & Vibration Symposium. This year the Naval Surface Warfare Center Dahlgren Division (NSWCDD), Northrop Grumman Newport News Shipbuilding (NG NNS) and PCB Piezotronics, Inc. (PCB) were selected. You will be hearing a lot more about them in future newsletter articles and at the Symposium so consider this as an introduction.

NSWC/DD, one of six divisions, has locations in Dahlgren, VA, Panama City, FL, and Dam Neck, VA and a web presence at www.nswc.navy.mil. NSWCDD mission is to provide research, development, test and evaluation, engineering, and fleet support for: Surface Warfare, Surface Ship Combat Systems, Ordnance, Strategic Systems, Mines, Amphibious Warfare Systems, Mine Countermeasures, and Special Warfare Systems. NSWCDD TAG members are James (Jamie) Howell III, Robert (Bob) Keen and Jeff Blankenship. Jamie will serve as the Program Committee Co-Chair. Jeff is the previous SAVIAC Director.

NG NNS, a sector of the Northrop Grumman Corporation is located in Newport News, VA and has a web presence at www.nn.northropgrumman.com. Newport News is the nation's sole designer, builder and refueler of nuclear-powered aircraft carriers and one of only two companies capable of designing and building nuclear-powered submarines. The company also provides after-market services for a wide array of naval and commercial vessels. NG NNS TAG members are Kevin Arden and Travis Kerr, Travis will serve as the Program Committee Co-Chair. This is the second time SAVIAC has featured them at a Symposium, the first being at the 67th Symposium in Monterey, CA, the first time a company was ever featured.

PCB is a group of companies with headquarters in Depew, NY and a web presence at www.pcb.com. They manufacture accelerometers, force sensors, load cells, microphones, pressure transducers, pressure transmitters, strain sensors, torque sensors, vibration sensors, signal conditioners, cables, and accessories. This instrumentation is used for test, measurement, monitoring, and feedback control requirements in industrial, R&D, military, educational, commercial, and OEM appli-

Featured Orgs, con't on Page 9

Call For Papers

75th Shock and Vibration Symposium

October 17-22, 2004

The Cavalier

Virginia Beach, VA

Planning for the 75th Shock and Vibration Symposium is underway. NSWC/Dahlgren Division is the Government Featured Organization and Northrop Grumman Newport News and PCB Piezotronics are the Commercial Featured Organizations. The Cavalier Hotel in Virginia Beach is the location.

The Shock & Vibration Symposium is the oldest continuously held meeting dealing specifically with the shock and vibratory response of air, sea, space, and ground vehicles and structures and blast effects. The Symposium was established as a mechanism for the exchange of information among Government activities, private industry, and academia on current work and new developments. Presentations on work in progress are encouraged. Separate sessions are held for presentation of classified or limited-distribution material.

Presentations in the following subject areas are welcomed:

901D Case Studies	Dynamic Scale Modeling	Product Announcement/Facility Description
Active Vibration Control	Dynamic Testing	Pyrotechnic Shock
Air Blast	Environmental Databases	Seismic Shock
Anti-Terrorist Technologies	Finite Element Analysis	Shock Characterization
Ballistic Shock	Fluid-Structure Interaction	Shock Hardening
Biodynamics	Ground Shock	Shock Qualification by Extension
Blast Design	Homeland Defense	Shock Response Spectrum
Blast Effects	Impact/Penetration Mechanics	Shock Test/Equipment Failure Modes
Combined Environments	Infrastructure Protection	Simulation Methods
Computational Structural Dynamics	Instrumentation	Specifications and Standards
COTS	Isolation Systems	Structural Hardening
Crash Dynamics	Large Structures	System Identification
Damage Identification	Live Fire Testing	Test Criteria
Damping	Machinery Diagnostics	Test Tailoring
Data Analysis	Machinery Vibration	Underwater Shock Testing
Dynamic Analysis Methods	Material Dynamic Properties	Vibroacoustics
Dynamic Measurement	Modal Analysis and Testing	

Two categories of presentations will be accepted: full papers, suitable for publication in the Symposium Proceedings; and short discussion topics, consisting of viewgraphs with no written paper. Full papers will have a 15 minute technical presentation time plus 5 minutes for questions, while short discussion topics will have a 10 minute presentation time with no question period.

Presentations will be accepted on the basis of their abstracts, which must be submitted by June 3, 2004. You are encouraged to submit online at www.saviac.org, click on 75th S&V Symposium Abstract Submittal. The Program Committee will review the abstracts during the July Program Committee meeting and authors will be notified of acceptance by July 16, 2004. The full paper presentations must meet the following standards: They must be previously unpublished and unrepresented, must be appropriate to community interests and must not be overtly commercial, except for papers in the Product/Facility session. Standards for short discussion topics are similar except that they may include previously presented or published material.

The Proceedings will be published on CD-ROM.

The paper due-date is October 8, 2004.

Questions should be directed to Joel Leifer, 301.596.0100 or joel.leifer@saviac.org.

Free Winter Shock & Vibration Seminar

SAVIAC invites you to attend a FREE seminar on Shock & Vibration. The course will be held on Wednesday, February 18, 2004 at The Naval Surface Warfare Center Panama City in Panama City, FL, the day before the SAVIAC Winter TAG Meeting. SAVIAC and the featured experts in their disciplines have organized this seminar to introduce you to the SAVIAC community, while providing a valuable educational experience.

Agenda

8:00 - 8:30	Registration & Continental Breakfast	
8:30 - 8:45	Introduction to SAVIAC	Joel Leifer, SAVIAC
8:45 - 9:00	Using SAVIAC to Address Your S&V Problems	Joel Leifer, SAVIAC
9:00 - 9:30	MIL-S-901 Requirements/Approval Process	Kurt Hartsough, NSWC/CD
9:30 - 10:00	Overview of Hazard Assessment Testing (HAT) per MIL-STD-2105	Jamie Howell, NSWC/Dahlgren
10:00 - 10:15	Break	
10:15 - 11:15	TBD	Kurt Hartsough, NSWC/CD
11:15 - 11:45	AF Lethality/Vulnerability Methodology Development	Ron Hunt, AFRL
12:00 - 1:00	Lunch	Courtesy of National Technical Systems, Inc.
1:00 - 1:30	Introduction to Random Vibration	Tom Paez, Sandia National Labs
1:30 - 2:00	Introduction to Blast Measurements	Pat Walter, PCB Piezotronics
2:00 - 2:30	Aluminized Explosive's Modeling	Eric Rinehart, DTRA
2:30 - 2:45	Break	
2:45 - 3:15	Human Shock & Fatigue	Ron Petersen, NSWC/DD/CSS
3:15 - 3:45	Shock Isolation	TBD, Enidine, Inc.
3:45 - 4:15	Transportation Vibration	Skip Connon, US Army Aberdeen Test Center
4:15 - 4:45	Introduction to Fuzes	Amy Herrmann-Spears, AFRL
4:45 - 5:00	Wrap-up & Questions	All

Please forward this invitation to anyone you know who may be interested in attending this program.

The seminar is free, but you must register to attend. You may register online at [www.saviac.org/75th Symposium/seminar registration form.htm](http://www.saviac.org/75th_Symposium/seminar_registration_form.htm), or RSVP to Lauren Yancey, (703) 892-0060 or lauren.yancey@saviac.org to assure your space and note packet. SAVIAC reserves the right to substitute topics and/or instructors when necessary. This schedule is subject to change. For more information about SAVIAC, or for a list of area hotels and directions to The Naval Surface Warfare Center Panama City, please visit our website at www.saviac.org.

Thank you to
National Technical Systems, Inc.
for sponsoring lunch for the attendees of the Winter Shock & Vibration Seminar.

NTS is the largest independent testing company in the nation and offers a complete spectrum of testing capabilities for any industry needing product evaluation and certification. For more information about NTS, visit their website at www.ntscorp.com.

Clean Up in 2004!

**Make an easy New Year's Resolution for 2004 -
Clean out your mailbox!**

Your snail-mail box, that is! Join SAVIAC's 2004 ListServ and have Current Awareness delivered straight to your Inbox! Every month! Paper-Free and interactive! Click on the articles you want to read, pass the ones you don't. E-mail Lauren Yancey at lauren.yancey@saviac.org to have yourself added to our mailing list.

Announcement for International Short Course on

Response of Marine Structures to Underwater Explosions

March 23-26, 2004

Monterey Beach Hotel

2600 Sand Dunes Drive, Monterey California 93940

Course Lecturers:

Professor Thomas L. Geers **Dr. Young S. Shin**
Dept. of Mechanical Engineering **Shock and Vibration Research**
University of Colorado **Monterey, California 93940**
Boulder, Colorado 80309

Course Objective & Overview

Course Objective:

The purpose of this course is to provide engineers, scientists, and naval architects a discriminating review of underwater explosion phenomena, structural response analysis, fluid-structure interaction, shock spectrum concept, and shock-induced vibration analysis of shipboard equipment.

Course Overview:

1. UNDERWATER EXPLOSION PHENOMENA: Sequence of Underwater Explosion Events, Hydrodynamic Relations, Underwater Acoustic Waves, Air-Water Interface, Shock Wave Parameters, Bubble Behavior and Bubble-Pulse Loading, Bulk and Local Cavitation, Scaling
2. ELEMENTS OF STRUCTURAL DYNAMICS: Analytical Dynamics, Classical Linear Oscillator, Two-Degree-of-Freedom System, Finite Element Discretization and Modeling, Finite Difference Time Integration
3. FLUID-STRUCTURE INTERACTION: Athwartship Response of Submarine, Vertical Response of Surface Ship, Submerged Plate Oscillator

4. DAA-BASED ANALYSIS: Submerged Spherical Shell, FE/BE Fluid-Structure Interaction, USA-DYNA, USA-NAS-TRAN, etc.
5. FLUID VOLUME DISCRETIZATION: Fluid Cavitation, Validation of Computer Codes
6. MODELING AND SHOCK SIMULATION: Three Dimensional Ship Shock Analysis, Modeling and Approaches
7. SHOCK QUALIFICATION OF SHIPBOARD EQUIPMENT BY DESIGN ANALYSIS: Shock Spectra, Normal Mode Analysis, Response of a Multi-DOF System to Shock Motion
8. DYNAMIC DESIGN ANALYSIS WORKSHOP: Dynamic Design Analysis Method (DDAM), DDAM Step-by-step Analysis Procedure, Design Criteria of Shipboard Equipment Using DDAM
9. APPLICATION TO SHIPBOARD EQUIPMENT USING DESIGN ANALYSIS: Application Problems

Course Organization

REGISTRATION FEE

The following registration fee includes the cost of all sessions, coffee breaks, and the course notes.

\$ 1,350 --- if paid by February 22, 2004.

\$ 1,500 --- if paid after that date.

ACCOMMODATION

A block of rooms has been reserved at special rates for short course attendees at the Monterey Beach Hotel (Rates \$75 single & 95 double). To qualify for these special rates, you must mention that you are attending the "Shock and Vibration Seminar". Attendees should contact the hotel directly to make reservations. The rooms at the special rates will only be held until February 22, 2004.

COURSE LOCATION

The course will be conducted in Monterey, California, USA;
 Monterey Beach Hotel
 2600 Sand Dunes Drive, Monterey, California 93940
 Phone: (800) 242-8627 or (831) 394-3321
 Fax: (831) 393-1912

FOR FURTHER INFORMATION, CONTACT:

Shock and Vibration Research
 10150 Blue Larkspur Lane
 Monterey, California 93940, USA
 Phone/Fax (831) 375-4999, Cell: (831) 277-7117
 email: yshin99@aol.com

WANTED

Ballistic Shock Analyst/Structural Analyst/Structural Dynamicist

Description: A senior structural analyst/structural dynamicist is needed to perform analysis and design functions related to the survivability of lightweight ground vehicle, components, and crew which may be subjected to weapon- induced shock loading. The position supports the long-term vehicle protection research program being executed at the Weapons & Materials Research Directorate (WMRD) of the U.S. Army Research Laboratory. The duties of the position are to be performed principally at Adelphi, MD, which is located in the metropolitan Washington DC area, with occasional travel to the WMRD situated at the Aberdeen Proving Ground area, some 65 miles from Adelphi. The duties are focused on two areas, shock characterization and shock protection. Because of the breadth and skills required to perform the work up to 2 individuals may be recruited to meet the ongoing research needs.

The work involves shock and structural analysis of lightweight combat vehicle systems and components, leading to their increased survivability to shock loading. The loading originates from the engaging kinetic or chemical weapons, such as high-velocity projectiles/penetrators, fragments, and blast energy. The analysis generally mandates the development and verification of sophisticated physics-based high frequency (≈ 10 KHz) structural models of complex vehicular configurations comprising multi-layer material architecture (metallic, ceramic, composite etc) using FEA tools such as Dyna, Abaqus, Ansys, etc. Proficiency in the use of native code and/or advanced pre, and post processors, such as Hypermesh, is required to efficiently construct models of the structure from CAD files (e.g., Pro-E) and/or to interpret and manage computational results. Model(s) will often be experimentally verified and updated, with the analyst involved in the development of the live fire test plan of the test article (vehicle, surrogate structure, panel, component, etc), as well as with the interpretation of data. Proficiency with data analysis tools such as MATLAB is required in support of the analysis and verification process outlined above.

Additional duties may involve use of the structural analysis and experimental tools to develop structural and/or material-based mitigation concepts that attenuate shock loading to the vehicle structure, critical component, and crew-thereby enhancing their survivability. This may entail the development of energy/impulse-based absorbing concepts or means that could be integrated into the vehicle structure, or placed locally to isolate components and crew. Included are passive, semi-active, and passive means to manage, diffuse, and otherwise control stress waves and loads to the allowable survivability/fragility criteria. The development, verification, and use of methods to establish the failure criteria of the component of concern, down to details such as leads of an electronic component, wire bonds, die attach, PWB, soldier joint integrity, acceleration tolerance of humans, etc, are integral to the overall development of shock protection concepts.

Other duties involve presentation of the work products to the technical staff and sponsors, participation and presentations in technical meetings and conferences, development of technical and associated cost proposals and preliminary strategic plans for future research thrusts, preparation of technical reports, as well as occasional travel in support of the work.

Qualification/Preferences

1. 5 years of applied or relevant experience
2. Masters level mechanical/aeronautical/civil engineering degree from an accredited institution
3. Proficiency with large scale elastic-plastic finite codes such as Dyna, Paradyne, Abaqus, Ansys, including use of native or associated pre and post processors such as Hypermesh, etc.
4. Proficiency in the use of blast/impact loading codes such as CONWEP, Blast-X, Dyna, CTH, etc.
5. Proficiency with data analysis tools and techniques such as MATLAB, LABVIEW, and standard digital processing techniques used in analysis of shock & vibration data (FFT, PSD, Modal Analysis) etc.
6. Proficiency with MS office suite software.
7. Proficiency in constructing large scale finite element models (millions of DOF's) and executing parallel processing calculations.
8. Ability to obtain security clearance.
9. Ability to guide and lead members of a small technical team.

Salary: Sr. Analyst- Up to \$ 100 K depending on qualification & experience; Bonus. POST-DOC-Up to \$ 60K + \$ 10 K relocation bonus.

POC: Ami Frydman, ARL, 301 394 2804; Afrydman@arl.army.mil

Announcement for International Short Course on

Ship-Shock Modeling and Simulation With Applications Using LS-DYNA/USA Code

March 23-26, 2004

Monterey Beach Hotel

2600 Sand Dunes Drive, Monterey California 93940

Course Lecturers:

<p>Dr. Young S. Shin Shock and Vibration Research Monterey, California 93940</p>	<p>Dr. John A. DeRuntz, Jr. Unique Software Applications Colorado Springs, Colorado 80906</p>
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Course Objective & Overview

Course Objective: The purpose of this course is to provide engineers modeling and simulation techniques of surface ship to compute the responses of ship structural system and components to underwater explosion. 1-D, 2-D and 3-D demonstration models and ship-shock simulations are reviewed using LS-DYNA/USA code.

Course Overview:

1. THEORETICAL BASIS FOR USA CODE

- Plane Wave Analysis
- Fluid-Structure Interaction Equations
- Augmentation for Unconditional Stability
- Fluid Volume Modeling & Cavitating Fluid Analysis

2. USA (Underwater Shock Analysis) CODE

- Capabilities, Features and Limitations
- Software Organization

Interfaces with LS-DYNA code

Input Deck Setup

3. LS-DYNA CODE FOR SHIP SHOCK MODELING

- Software Organization
- Ship Structure and Surrounding Fluid Modeling
- Radiation Fluid Boundary
- Ship System Damping Modeling & Error Correlation Factors

4. LS-DYNA AND USA INPUT DECK SETUP

- Ship Structures and Surrounding Fluid
- Ship System Damping
- Radiation Boundary and Shock Analysis Geometry

5. SHIP SHOCK MODELING & SIMULATION PROBLEMS 1D, 2D and 3D Model and Analysis

6. QUESTIONS / ANSWERS AND DISCUSSIONS

Course Organization

REGISTRATION FEE

The registration fee is \$1,000 which includes the cost of all sessions, coffee breaks, and the course notes. Early registration is suggested because enrollment is limited. Please send us email or phone call requesting registration form.

ACCOMMODATION

A block of rooms has been reserved at special rates for short course attendees at the Monterey Beach Hotel (Rates \$75 single & 95 double). To qualify for these special rates, you must mention that you are attending the "Shock and Vibration Seminar". Attendees should contact the hotel directly to make reservations. The rooms at the special rates will only be held until February 22, 2004.

COURSE LOCATION

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FOR FURTHER INFORMATION, CONTACT:

Shock and Vibration Research
10150 Blue Larkspur Lane
Monterey, California 93940, USA
Phone/Fax (831) 375-4999, Cell: (831) 277-7117
email: yshin99@aol.com

INDUSTRY NEWS

National Technical Systems To Acquire Provider Of Large Scale Shock And Vibration Tests For US Navy

CALABASAS, CA - National Technical Systems, Inc., a leading provider of quality and conformance testing and managed services for industries, including aerospace, defense, telecommunications and information technology, announced today that it has entered into an agreement in principle to acquire, for a combination of cash and NTS common stock, substantially all of the assets and business of privately-held DTI Holdings, LLC, doing business as "Dynamic Testing" (DTI), headquartered in Rustburg, VA. According to NTS Chairman and CEO Jack Lin, Ph.D., the acquisition of DTI is part of the Company's strategy to increase revenues and profits by offering new and existing customers an expanded and well-differentiated range of engineering services and testing resources.

DTI provides its customers a unique set of large-scale, high technology shock and vibration testing services that are used in performing underwater shock and vibration tests for mission-critical equipment employed in a variety of applications including propulsion and auxiliary equipment, navigation, communications and weapons guidance. Its customers include the U.S. Navy and other U.S. and foreign government agencies, as well as a number of prime contractors and commercial organizations. In addition to testing services, DTI also offers its customers a full line of shock isolators. In the past, DTI has supplied services to NTS as a vendor to fulfill the needs of a number of NTS customer contracts.

Dr. Lin said, "We have provided a significant level of engineering and testing services to the U.S. Army and Air Force for more than 40 years, and while the U.S. Navy has also been an important NTS customer, with the acquisition of DTI, we will be positioned to significantly increase our business with the Navy and those

companies supplying equipment used on ships throughout the world."

Completion of the acquisition, which is expected within the next 60 days, is subject to the satisfactory completion of due diligence, final approval by the board of each company, the execution of a definitive agreement and other customary closing conditions. Further details were not disclosed. "We have had an excellent working relationship with DTI over the years and it makes good business sense to integrate this well respected organization with its unique skills and resources with NTS," commented NTS President and Chief Operating Officer William C. McGinnis.

"We believe DTI will be an excellent strategic and operational fit for our existing engineering services and testing business," McGinnis added. "When closed, we anticipate the acquisition will be accretive from the outset. In addition, it will provide opportunities for NTS to service the testing requirements of our base of Homeland Security customers. Access to the broad range of shock and dynamic testing technologies of NTS will also greatly enhance the DTI service offerings to its current customers."

National Technical Systems, Inc. is a business-to-business services company providing organizations in the aerospace, defense, information technology (IT) and high technology markets integrated testing, certification, quality registration, systems evaluation and engineering solutions. For additional information about National Technical Systems, visit its web site at www.ntscorp.com.

VibraMetrics Announces The Release Of The New Model 6050 Accelerometer

PRINCETON, NJ - VibraMetrics is pleased to announce the release of the completely new model 6050 vibration sensor. Standing only 1.5 inches high, the unit is constructed of 316 stainless steel, with a welded hermetic seal, and a 1/4 - 28 mounting stud. It has a 2Hz-

20kHz frequency response (3 dB) with a 100 mV/g sensitivity. Regarding the product release, the VibraMetrics Sales and Marketing Manager, Scot Wlodarczak stated, "the 6050 accelerometer is a very significant addition to the VibraMetrics product line which lacked an inexpensive, general-use industrial accelerometer. The model 6050 sensor offers excellent frequency response, a tighter 100 mV/g sensitivity and a very small size relative to competitive economy units." The unit sells for only \$89.00 US list price.

For more information on this or other VibraMetrics products, please visit the VibraMetrics website at www.vibrametrics.com. You may also contact VibraMetrics via phone at 609.716.4130, or by e-mail, sales@vibrametrics.com.

High Pressure, High Frequency Probes

DEPEW, NY - The Pressure Division of PCB Piezotronics, Inc. introduces Series 109 and 119 pressure probes that feature an acceleration-compensated quartz element, high resonant frequency, and a rugged ceramic-coated integral diaphragm. Designed for pressure measurements up to 120,000 psi, with options for high temperature and high shock environments, these sensors will withstand harsh environments. Typical applications include measurement of shock and blast waves, combustion detonation and explosions in closed bombs, ballistics, projectile velocity, free field blast and explosive testing, and squib lot acceptance.

For additional information on these sensors, contact the Pressure Division of PCB Piezotronics, Inc., toll-free at 888.684.0011, e-mail: pressure@pcb.com, or fax 716.686.9129. For other PCB products, contact PCB directly at 716.684.0001 or visit our web site at www.pcb.com.

Conference Announcements

2004 Planetary Defense

Conference: Protecting Earth from Asteroids

The American Institute of Aeronautics and Astronautics (AIAA)

Feb 23-26, 2004

Orange County, CA

The 2004 Planetary Defense Conference: Protecting Earth from Asteroids conference will consider planetary protection from the systems perspective: define the threats, look at deflection options and available technologies, discuss characteristics of candidate missions to mitigate the threats, and consider the policy and disaster preparedness implications. Participants will develop a set of recommendations for improving our ability to successfully defend our planet from possible impact threats.

The mission design aspects of the conference will focus on options for defending Earth from three Defined Threat (DEFT) scenarios – one posed by an approaching comet and two assuming approaching asteroids. Disaster preparedness and policy discussions will consider how we might prepare for the specific threats posed by the DEFT scenarios. Impact Scenarios

For more information please visit the AIAA website at www.aiaa.org.

9th International Conference on Engineering, Construction & Operations in Challenging Environments

American Society of Civil Engineers

March 7-10, 2004

Houston, TX

The Aerospace Division of the American Society of Civil Engineers invites you to plan for and participate in our 9th Biennial International Conference on Engineering, Construction and Operations in Challenging Environments. At this Conference, you will meet people from a variety of disciplines, and have ample enjoyable opportunities to discuss the confluence of engineering, construction, and operations in chal-

lenging environments that include planet Earth, Space, and other planetary bodies such as the Moon and Mars. One of the main goals of this Conference is technology transfer. This conference is designed for those involved in analysis, design, operation, research, planning and commercialization in areas encompassing aerospace and civil engineering.

The Student Robotics Competition, a regular highlight of the Conference, will once again showcase student ingenuity in solving a space-based technical problem. The competition is open to any university, college, or high school team, and students from both technical and non-technical disciplines are encouraged to participate. Team sponsorship and advising is also open to industry.

For more information about this and other ASCE Conferences, please visit www.asce.org/conferences/space04.

SAE World Congress 2004

The Engineering Society For Advancing Mobility in Land Sea Air and Space

March 8-11, 2004

Detroit, MI USA

SAE 2004 World Congress is home for the global automotive engineering community. With more than 38,000 attendees and 1,000 exhibitors, Congress is densely populated with your peers, your business partners, industry visionaries, technology leaders, educators from around the world.

Like industry, the SAE 2004 program and exhibition is thorough and diverse in technology, global in scope. It is massive. It is targeted. Built from a core outline of technical interests, it is the one annual event that every engineer, manager and executive can count on for the highest quality technical and business information available in this global industry. The SAE 2004 World Congress will feature a 1,600 plus Paper Program over 1,000 exhibitor showcases, an AVL Technology Theater, the Dana

Technical Innovation Forum, OEM Advanced Technology Displays, a Special Program on High Performance Vehicles and many other special panels and events, and learning and networking opportunities. To register for the conference, please visit <http://www.sae.org/congress/about/register/>.

8th International Conference on Structures Under Shock & Impact

Wessex Institute of Technology

March 29-31, 2004

Crete, Greece

SUSI 2004 is the eighth international conference in the series on 'Structures Under Shock and Impact'. The meeting's chief objective is to attract support from as wide a spectrum of expertise as possible and across a broad range of impact problems throughout industry. The shock and impact behaviour of structures is a difficult area, not only because of its obvious time-dependent aspects, but also because of the difficulties in specifying the external dynamic loading characteristics and in obtaining the full dynamic properties of materials. Thus it is important to recognise and fully utilise the contributions and understanding emerging from theoretical, numerical and experimental studies, as well as investigations into the material properties under dynamic loading conditions. Visit www.wessex.ac.uk for a list of topics giving an idea of the wide range of applications to be discussed during the meeting. Contributions in topics not listed are also welcome if they fall within the scope of the SUSI conference.

This conference will be of interest to engineers from civil, military, nuclear, offshore, aeronautical, transportation and other backgrounds, who are actively involved in the research and engineering of structures under shock and impact. For more information about this conference, or to register online, visit www.wessex.ac.uk/conferences/2004/structures04/index.html#OBJECTIVES.

Short Course Announcements

Be sure to check www.saviac.org for more information on upcoming events.

Practical Shock Analysis & Design Short Course

The MFPT Society

Feb 23-27, 2004

Panama City, FL

This course will provide a comprehensive treatment of practical shock design and analysis with special emphasis on applications related to the design of ship structures and equipment for shock loads produced by underwater explosions. Participants in this course will have an opportunity to increase their knowledge and understanding of the analytical and experimental tools that are available for shock design and qualification particularly with respect to requirements that are imposed for shipboard equipment. Although this course is aimed primarily at shock design applications on ships, the

analysis and design techniques presented are equally applicable to problems related to design for seismic loads or blast induced ground shock. For all who participate, the course will provide a comprehensive coverage of shock design practice and a solid basis for further exploration of shock technology.

The Registration Fee is \$1200 per student. The fee includes a comprehensive set of course notes, a text book entitled Naval Shock Analysis and Design by Rudolph J. Scavuzzo and Henry C. Pusey, a Certificate of completion worth 3 CEUs, as well as a Continental Breakfast, Lunch and coffee breaks daily. A Registration Form may be requested from Sallie or Henry Pusey, Tel: (540) 678-8678;. All completed registration forms should be

faxed to Sallie Pusey, Fax: (540) 678-8799

Use of the 6DOF SIMPLE Method in the Process for Designing and Assessing Shock Mounted Systems

Instructors: Michael Talley and Bob Krezel. Each person should bring a laptop computer having Windows 95 or higher and a CD or Zip drive. Location: Hilton Norfolk Airport, 1500 North Military Highway, Norfolk, VA 23502. Tel: 757-466-8000. 30 January, 2003 Time: 9:00am to 4:00pm. To register send an e-mail with the names of those attending to bob_krezel@hotmail.com. Cost: \$500.00 per person (includes training, lunch, drinks, and snacks) due on or before 23 January 2003

It's not too late... you can still get your FREE 2004 SAVIAC Calendar!

Don't miss out on all of the most important shock & vibration events of 2004! To receive your complimentary copy of our calendar, e-mail Lauren Yancey at lauren.yancey@saviac.org.

Keynote, con't from Page 1 NSWC consolidates the work, capabilities, and specialized facilities supporting all aspects of surface warfare—from research and development, to Program Executive Office (PEO) support, to Fleet support—and brings to bear unparalleled scientific, engineering, and technical talent to contribute innovative solutions to surface warfare problems. This full-spectrum center enables the Navy to exercise central leadership in the areas required for fulfillment of the surface warfare mission, and enhances the overall ability to operate effectively and meet critical cost and performance objectives.

Featured Orgs, con't from Page 1 cations. The PCB TAG member is Pat Walter who will also serve as the Program Committee Co-Chair.

This is just a short introduction, you will see more about the capabilities of these organizations in future newsletters, culminating in some really innovative programming at the 75th Symposium.

Questions? Comments? Suggestions?

We want to hear your voice! Do you have an idea for a future article? Do you have a comment about a past article? Do you want to place an ad? Is there something missing that you feel we should include? Please contact SAVIAC with any questions, comments, or suggestions regarding this or any other issue of *Current Awareness*. E-mail Lauren Yancey at lauren.yancey@saviac.org, or call SAVIAC at 301.596.0100. We'd love to hear from you!



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In the January 2004 Current Awareness Newsletter

***Mary Lacey Accepts Invitation to Keynote at 75th
Shock & Vibration Symposium
A Preview: The 75th Symposium's Featured
Organizations
FREE Shock & Vibration Seminar
Industry News
Conference & Short Course Announcements***

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